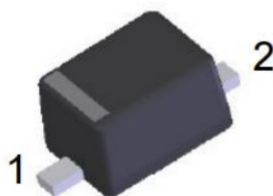


Features

- Multilayer Metal -Silicon Potential Structure
- High Current Capability, High Efficiency
- High Junction Temperature Capability
- Low Leakage Current
- RoHs Product



SOD-323FL

Applications

- Surface mount schottky barrier rectifier
- Buck and Boost dc-dc Converters
- Low Voltage High Frequency Switching Power Supply
- Low Voltage High Frequency Invers Circuit
- Low Voltage Continued Circuit and Protection Circuit



Absolute Maximum Ratings

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	VRRM	40	V
Maximum DC blocking voltage	VDC	40	V
Maximum average forward rectified current	IF(AV)	1.0	A
Non-repetitive Peak Forward Surge Current @t=8.3ms Half-sine wave	IFSM	10	A
Junction Temperature	Tj	-55 ~+150	°C
Storage temperature range	TSTG	-65 ~+150	°C
Between junction and terminal	RθJL	28	°C /W
Between junction and ambient	RθJA	88	°C /W

Device mounted on an FR4 PCB, single-sided copper, tin-plated, mounting pad for cathode 1 cm².

Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse current	IR	VR=40V	--	--	50	uA
		VR=10V	--	1.1	--	uA
Forward voltage	VF	IF=10mA	--	--	310	mV
		IF=100mA	--	--	400	mV
		IF=500mA	--	--	530	mV
		IF=1A	--	--	660	mV
Total Capacitance	CT	VR = 1V, f = 1 MHz	--	60	70	pF

Typical Electrical Characteristic Curves

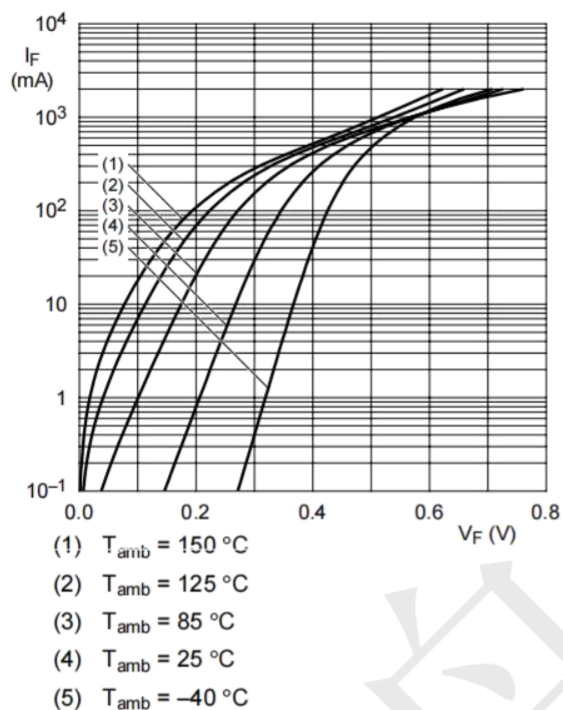


Fig 1. Forward current as a function of forward voltage; typical values

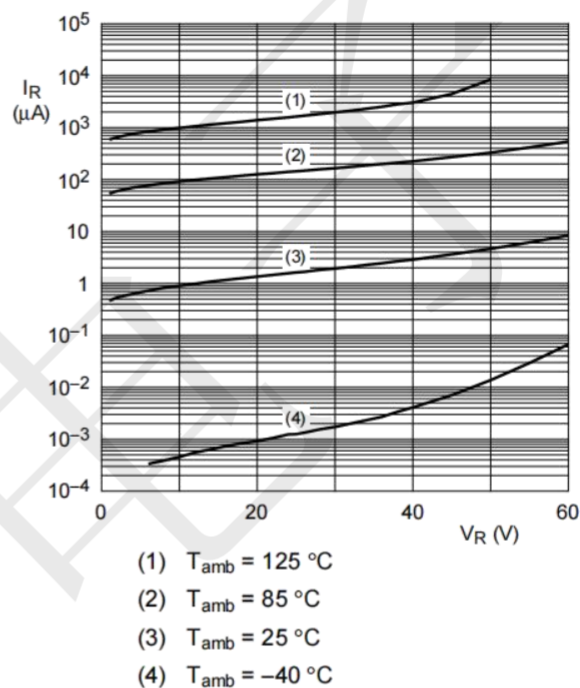
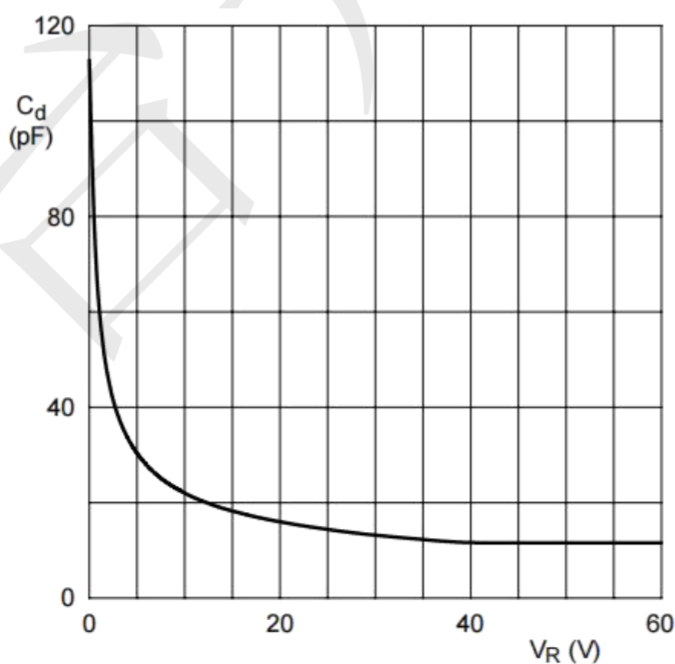


Fig 2. Reverse current as a function of reverse voltage; typical values

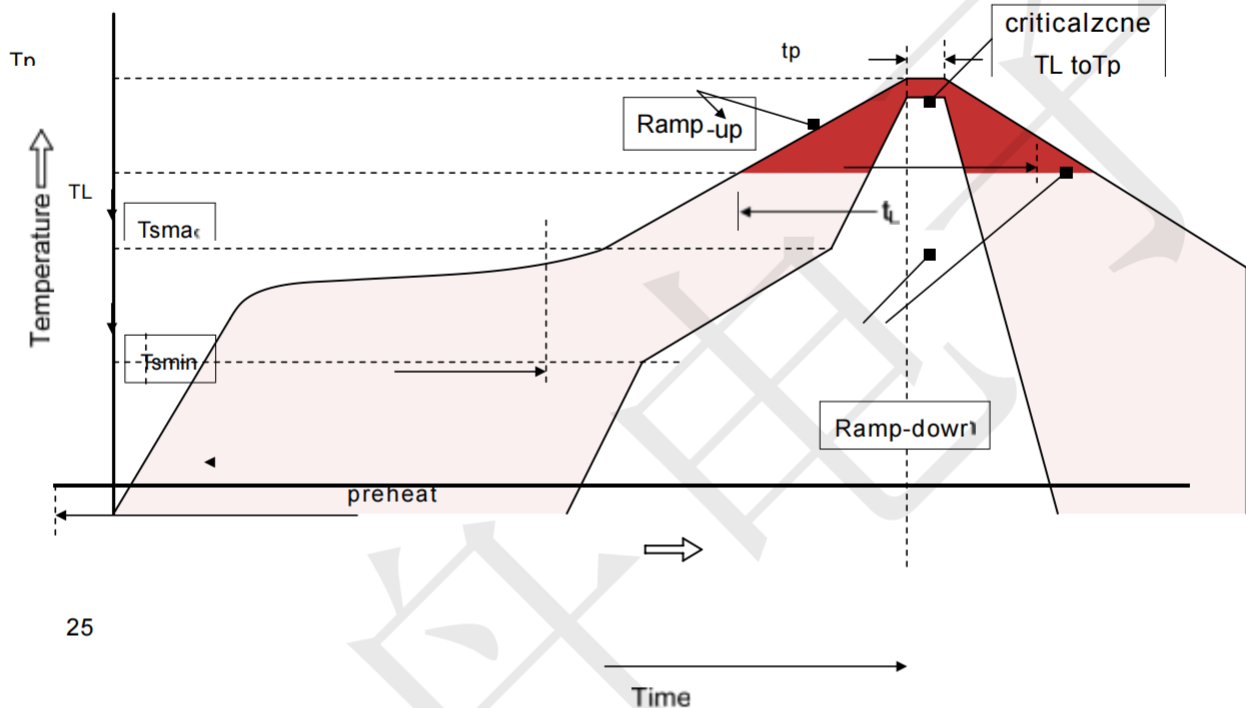


$f = 1\text{ MHz}; T_{amb} = 25\text{ }^{\circ}\text{C}$

Fig 3. Diode capacitance as a function of reverse voltage; typical values

Recommended Soldering Conditions

Reflow Soldering

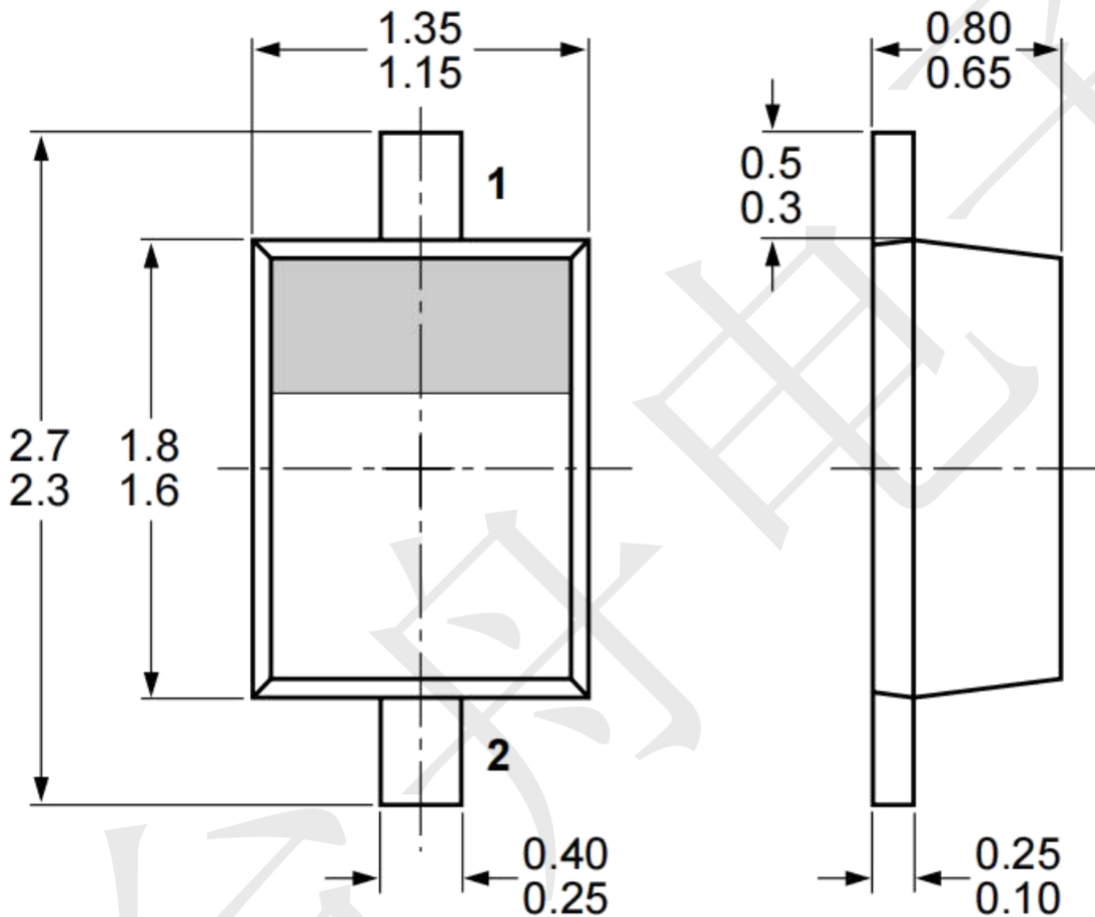


Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat	
-Temperature Min (T_{Smin})	150°C
-Temperature Max (T_{Smax})	200°C
-Time (min to max) (ts)	60-180 seconds
T_{Smax} to T_L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T_L)	217°C
-Time (t_L)	60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

Package Outline Dimensions (unit: mm)

SOD-323FL



Mounting Pad Layout (unit: mm)

